118 less, which overlaps the cutting cylinders more in each cutting stroke, thus reducing the volume of unsampled tissue.

Yet another embodiment of a cutting wire is illustrated in Figures 20 and 21. Figure 20 illustrates a bipolar cutting wire 300 which includes a simple cutting loop 302 and an actuating portion 304 which extends proximally from cutting loop 302. Cutting wire 300 is a bipolar cutting wire and includes two conductors therein of approximately equal surface area. Cutting loop 302 includes a first, inner loop 306, an insulating layer 308, and an outer loop 310. Inner and outer cutting loops 306, 310 are formed of materials similar to those of the cutting loops previously described, while insulating layer 308 is formed of a material which electrically insulates cutting loops 306, 310 from each other when energized. As illustrated in Figure 21, which illustrates a cross-sectional view of cutting loop 302 taken at line 21-21 in Figure 20, each of inner and outer cutting loops 306, 310 are connected physically and electrically to conductors 312, 314, respectively, which are part of or comprise actuating portion 304. An insulating and/or reinforcing layer 316 may be provided between conductors 312, 314, to electrically insulate the conductors from each other, and to add mechanical strength to actuating portion 304.

According to yet another embodiment, illustrated schematically in Figure 1 with dotted line 320 and in greater detail in Figure 22, patient return pad 110 is replaced in system 100 with a return electrode 322 that is formed into cannula 152, thus making cannula 102 a pseudo-bipolar RF cutting device. Cannula 102 is not a true bipolar cutting device in this embodiment, because a true bipolar device includes electrodes with substantially the same surface area, while return electrode 322 has a surface area significantly greater than the cutting loop. A large portion of the distal end of outer cannula 152 is the return electrode for the RF circuit, except for small portions at sidewalls 164, 166 and endwalls 168 and 170. Sidewalls 164, 166 and endwalls 168 and 170 are preferably formed to be electrically insulating, so that

incidental contact between the cutting loop and the sidewall will not short the RF energy circuit. Sidewalls 164, 166 and endwalls 168 and 170 can be coated with an electrically insulating material, formed of a different material and integrated into outer cannula 152, or may comprise any other suitable structure which electrically insulates the cutting loop from the outer cannula. Outer cannula 152 includes an electrical conductor 324 connected between return electrode 322 and RF generator 106.

According to yet another embodiment (not illustrated), the device or mechanism by which the tissue samples are retrieved is not limited to only a source of vacuum. Instead of or in addition to vacuum source 108, a tissue sampling mechanism can further include a grasper that is extendable through main lumen 122 to grasp a tissue sample therein and allow the practitioner to pull the sample proximally out of the cannulae. Alternatively, a tissue sampling mechanism can further include a piston-like element in the distal portions of main lumen 122, which can be caused to move proximally in main lumen 122 to push a tissue sample therein proximally out of the cannulae. Other embodiments of tissue sampling mechanisms will be readily apparent to one of ordinary skill in the art and within the spirit and scope of the invention.

While the invention has been described in detail with reference to preferred embodiments thereof, it will be apparent to one skilled in the art that various changes can be made, and equivalents employed, without departing from the scope of the invention.